

“If I were not a physicist, I would probably be a musician. I often think in music. I live my daydreams in music. I see my life in terms of music.”

Albert Einstein

MUSIC A WELCOME GUEST ON SPACE MISSIONS

Celestial sounds

by Kendra Phipps



“When we hear different pieces of music, it triggers memories and moods,” said Walt Sipes, chief of operational psychology at Johnson Space Center. Sipes and his team provide psychological support to International Space Station astronauts, helping them feel more at home and handle stress during long-duration missions.

“We do a full-court press, and music is one part of it,” he said. The group keeps crews informed and entertained by electronically sending up newspapers, movies and favorite songs.

Resting an arm on the window, the passenger gazes through the glass and takes in the passing scenery. Colors blur together as the vehicle cruises along. A song plays quietly on the radio.

Free from the responsibility of steering and braking, she closes her eyes and lets the song clear her mind. She thinks back to when she first heard it in college—or was it high school? Old friends come to mind, jokes she’d forgotten they’d shared, places she’d forgotten she’d been.

Music is driving and, for the moment, she’s just along for the ride.

A few songs later, she opens her eyes, smiles and floats over to turn the music off. She’s got a long checklist to complete before tomorrow’s spacewalk.

Music is the best part of any journey, whether it’s a road trip or a trip down memory lane. So it’s only fitting that music come along with astronauts on the ultimate journey into space.

Music may be just one tool in Sipes’ kit, but it’s an important one. Unlike some other forms of entertainment, music has no visual element, leaving the mind free to picture what it will and go where it wants. An astronaut could enjoy an opera while checking out the spectacular view out the window, or let an old favorite rock song mentally take him back to his air-guitar glory days.

As many Earth-bound exercisers know, music can also be a great motivator to get moving in the morning.

“The place I listened the most was in the node on the resistive exercise device while I was working out,” said Expedition 11 Science Officer and Flight Engineer John Phillips. “It was very nice to have.”

Sipes agreed that music can help with exercise. “When you think of ‘Rocky’ and

hear that music—he’s out there pounding the pavement every morning, so naturally people listen to that to exercise,” he said.

Since it’s hard to purchase a favorite movie soundtrack from 220 miles above Earth, Sipes and his team burn music onto discs for crewmembers before each mission, taking into account the astronaut’s personal preferences and tastes. Additional files can be sent electronically during the mission. Expedition 12 even got a special live performance when part of a Paul McCartney concert was linked up to the station in November 2005.

MAKING COSMIC MUSIC

However they receive it, music can be a welcome piece of home for astronauts. But creating music can be just as fun as listening to it.

Several astronauts have brought musical instruments to the space station. Expedition 4 Flight Engineer Carl Walz brought a keyboard with him, which has been enjoyed by several station crews—it even provided the wedding music for Expedition 7 Commander Yuri Malenchenko’s long-distance nuptials. Expedition 3 Commander Frank Culbertson practiced his trumpet onboard, and a guitar has been played by several astronauts. At one point, an Australian aboriginal wind instrument called a didgeridoo was onboard.

Since space station missions last around six months, crewmembers have some free time to explore interests such as music.



Astronaut Edward T. Lu, Expedition 7 NASA ISS science officer and flight engineer, plays a musical keyboard during off-shift time in the Destiny laboratory on the International Space Station.



Astronaut Carl E. Walz (lower left), Expedition 4 flight engineer, plays host to some crewmates as he performs on a musical keyboard in the Destiny laboratory on the International Space Station. From the top, clockwise, are astronauts Rex J. Walheim, Jerry L. Ross, Ellen Ochoa, Lee M. E. Morin, all STS-110 mission specialists, and Stephen N. Frick, STS-110 pilot; along with astronaut Daniel W. Bursch (right foreground), Expedition 4 flight engineer.

“Music, like other forms of recreation, is an essential part of the crew’s well-being,” said Flight Director Cathy Koerner. She said that a space station crew usually has a few hours per day set aside “to eat meals and prepare for, or unwind from, their day,” along with weekends and holidays.

Space shuttle crews are in space for a much shorter time, so they have less free time to spare; however, shuttle crews have a built-in daily dose of music in the form of wake-up songs.

“Wake-up music for shuttle missions is generally selected by the crew office,” said Koerner. “Most of the songs are selected for or by individual crewmembers and represent something of significance to them.” She added that crew families are sometimes allowed to submit songs for their loved ones to wake up with.

Some shuttle astronauts have also played instruments in orbit. *Challenger* astronaut Ronald McNair took a soprano saxophone on his first flight, STS-41B, and found time to play a medley of songs. Astronaut Ellen Ochoa, a classical musician, brought her flute as a personal item on STS-56.

MUSICAL PRANKSTERS

But the honor of being the first space musicians goes to Gemini 6 astronauts Wally Schirra and Thomas Stafford. On Dec. 16, 1965, the two caused a stir in Mission Control with a report of an “object” near their spacecraft. Heart rates on the ground may have been racing until a familiar song came over the wire: Schirra was playing “Jingle Bells” on the harmonica, backed up by Stafford on the sleigh bells. The reported UFO must have been Santa Claus, making an early practice run before Christmas Eve. The first instruments played in space are now in the Smithsonian National Air and Space Museum.

Stafford told *Smithsonian* magazine that the musical prank was Schirra’s idea.

“He could play the harmonica, and we practiced two or three times before we took off, but of course we didn’t tell the guys on the ground,” said Stafford. “We never considered singing, since I couldn’t carry a tune in a bushel basket.”

From pocket harmonicas in a Gemini capsule to an electronic keyboard on the space station, music in space has come a long way. But it only makes sense that something as human as this art form would play a role in human spaceflight.

“The strangest thing about playing music in space,” Walz once said, “is that it’s not strange. In most homes, there’s a musical instrument or two. And I think it’s fitting that in a home in space you have musical instruments as well. It’s natural.”



Starport fitness

by Jenna Mills
Illustrations by John Streeter

BLAST OFF

to a healthy future with the JSC Exploration Wellness Program! The wellness program kicked off the grand reopening festivities at the Gilruth Center in February to unveil improvements made over the last year. Employees came and went throughout the week with opportunities for having blood pressure screenings, receiving chair massages, hearing unique speakers, touring new facilities, signing up for membership and more.

So, what's new? The Gilruth Center is now equipped with a 7,000-square-foot state-of-the-art fitness facility, two group exercise rooms and renovated men's and women's locker rooms. After their midday workout, employees in a hurry can

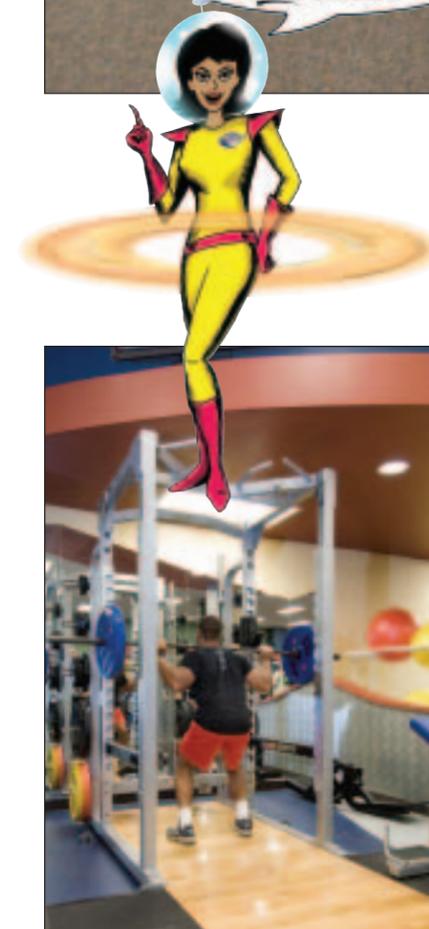
grab ready-made healthy lunches at the Starport Gift Shop now located inside the lobby.

The wellness program is committed to the health and well-being of JSC employees. The remodeled Gilruth Center is just the beginning. In the months to come, new programs will be implemented, and soon all members will be able to log in to the new Exploration Wellness interactive Web site, where they can create their own personal profile and set up a personalized program to fit their needs.

The JSC Exploration Wellness Program is up to the challenge of creating a healthy new you. Are you ready to commit to be fit in 2006?



The new fitness facility prompted many JSC employees and retirees to get moving and become healthier in 2006. Some employees (above) get in a quick workout during their lunch break before heading back to their busy schedules.



Above: Wellness Coordinator and fitness instructor Jennifer Blok leads a group of energized JSC employees during an afternoon step aerobics class.

Left: IT Security Specialist, Bobby Simpson II, works out his legs with another set of squats using the Olympic rack located in the new fitness facility.